

REMARKS

Claims 1-59 are pending. By this Amendment, new claims 58 and 59 are added. No new matter has been added. For example, the features claimed in claims 58 and 59 find support in the application, for example, at paragraph [0058]. Reconsideration is respectfully requested in view of the following remarks.

I. The Claims Define Patentable Subject Matter

The Office Action rejects claims 1, 2, 4-6, 11, 12, 14-16, 19, 20, 23-26, 28, 30, 36, 39, 41, 44, 46, 53, 55 and 56 under 35 U.S.C. §103(a) over Ohuchi (U.S. Patent No. 6,353,267) in view of Tomita (U.S. Patent No. 5,874,365); rejects claims 3, 7-10, 13, 17, 18, 27, 29, 31-35, 37, 38, 40, 42, 43, 45, 47-52, 54 and 57 under 35 U.S.C. §103(a) over Ohuchi in view of Tomita and further in view of Ogawa (U.S. Patent No. 4,418,284); rejects claim 21 under 35 U.S.C. §103(a) over Ohuchi in view of Ogawa; and rejects claim 22 under 35 U.S.C. §103(a) over Ohuchi in view of Ogawa and further in view of Takeuchi (U.S. Patent No. 6,005,474). The rejections are respectfully traversed.

In particular, neither Ohuchi nor Tomita, individually or in combination, discloses or suggests disposing a support on a surface of a semiconductor substrate on which a protrusion is formed, a part of the support overlapping with the second area being thicker than another part of a support overlapping with the first area, as recited in independent claim 1.

The Office Action at page 3 admits that Ohuchi does not disclose or suggest this feature. However, the Office Action asserts that Tomita discloses the above noted feature of claim 1. Applicants respectfully disagree.

Tomita discloses at Fig. 1, at col. 3, lines 1-12, and at col. 8, lines 4-8, a protective film 8 at a periphery portion of a semiconductor wafer that has a thickness greater than a thickness of a protective film 6 at a center portion of the semiconductor wafer. Tomita does not disclose that the protective film is used as a support. Furthermore, because Tomita does

not disclose or suggest a substrate having a first area and a second area, Tomita cannot disclose or suggest a support with the above noted features of claim 1.

Claims 2 and 3 recite disposing a support on a surface of the semiconductor substrate on which the resin layer is disposed, a part of the support overlapping with the second area being thicker than another part of the support overlapping with the first area.

For reasons as discussed with respect to claim 1, neither Ohuchi nor Tomita disclose or suggest the above noted features of claims 2 and 3.

Furthermore, neither Ohuchi nor Tomita, individually or in combination, discloses or suggests disposing a support on a surface of the semiconductor substrate on which a protrusion is formed, so that a through hole of the support overlaps with the first area, as recited in independent claim 11.

As discussed with respect to independent claim 1, Tomita merely discloses that a protective film 8 at a periphery portion of a semiconductor wafer that has a thickness greater than a thickness of the protective film 6 at a center portion of the semiconductor wafer. Nowhere does Tomita disclose or suggest that a support is disposed so that a through hole of a support overlaps with a first area. Therefore, Tomita does not disclose or suggest the features of independent claim 11.

Claims 12 and 13 recite disposing a support on a surface of the semiconductor substrate on which a resin layer is disposed, so that a through hole of the support overlaps with a first area. As discussed with respect to independent claim 11, nowhere does Tomita disclose or suggest a support is disposed so that a through hole of the support overlaps with a first area. Therefore, Tomita does not disclose or suggest the features of claims 12 and 13.

Claim 21 recites disposing a protruding electrode on a resin layer and above the first and second areas. The Office Action at page 6 admits that Ohuchi does not disclose disposing a protruding electrode on the resin layer. The Office Action also at page 5 admits

that Tomita does not disclose this feature either. However, the Office Action asserts that Ogawa discloses this feature. Applicants respectfully disagree.

Ogawa discloses at Fig. 4C and at col. 4, lines 54-56, that a light shielding layer 12 is disposed on a resin layer 13. Contrary to that asserted in the Office Action, the light shielding layer 12 is not a protruding electrode.

Therefore, independent claims 1, 2, 3, 11, 12, 13 and 21 define patentable subject matter. Claims 4-10, 14-20 and 22-57 depend on the respective independent claims, and therefore also define patentable subject matter. Therefore, withdrawal of the rejections under 35 U.S.C. §103(a) is respectfully requested.

Additionally, none of the applied references disclose or suggest at least one protrusion is set in an opening of the through hole, as recited in independent claim 58 and similarly recited in independent claim 59. Therefore, independent claims 58 and 59 define patentable subject matter.

II. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-59 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,


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Attachment:
Amendment Transmittal

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